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REPORT NO. 10

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PROCUREMENT SECTION
CURRENT SERIAL RECORDS

Cotton Fiber and Processing Test Results

CROP of 1971



Consumer and Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38117 December 24, 1971

This is the tenth of a series of reports of fiber and processing test results from the 1971 cotton crop. Subsequent reports in this series will follow at approximately two-week intervals during the harvesting season, and will be summarized in a comprehensive report at the end of the season. This series will present data on the same subject as "Summary of Cotton Fiber and Processing Test Results, Crop of 1970", March 1971. These reports are published by the Standardization Section, Cotton Division, Consumer and Marketing Service, U. S. Department of Agriculture, P. O. Box 17723, Memphis, TN 38117.

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1971

Discussion of Test Results

Cotton testing laboratories of the Consumer and Marketing Service, USDA, report that fibers from Southwestern short staple samples tested, to date, are weaker than through the same period a year ago. Shirley Analyzer nonlint content and picker and card waste is higher. Yarns spun from these samples are weaker and show more imperfections. Average spinning potential yarn number is lower than last season.

Averages for all medium staple samples tested through December 17, 1971 show longer fibers than a year ago. Zero gage fiber strength is lower. Yarns spun from these samples show higher appearance grades than last season.

Medium staple samples from the Southeast are weaker than a year ago. Yarns spun from these samples are weaker with more imperfections and higher appearance grades.

South Central medium staple samples are longer, finer and weaker at zero gage fiber strength than last year. Yarns spun from these samples show higher appearance grades.

Medium staple samples from the Southwest are coarser and weaker at 1/8-inch gage strength than a year ago. Picker and card waste is lower. Yarns spun from these samples show higher appearance grades and fewer imperfections. Average spinning potential yarn number is lower.

Medium staple samples from the West are longer than last year.

Averages for all long staple samples tested, not including roller ginned, are finer and weaker than a year ago. Picker and card waste is higher while comber waste is lower. Yarns spun from these samples are weaker with higher appearance grades and fewer imperfections.

Long staple samples from the Southeast are finer and weaker than last season. Picker and card waste is higher while comber waste is lower. Both carded and combed yarns are weaker and show higher appearance grades.

South Central long staple samples are longer than last year. Shirley Analyzer nonlint content is higher. Comber waste is lower. Yarns are generally stronger with higher appearance grades and fewer imperfections. Average spinning potential yarn number is higher.

Long staple samples from the West are weaker at 1/8-inch gage fiber strength. Shirley Analyzer nonlint content and comber waste are lower while picker and card waste is higher. Yarns spun from these samples are weaker with higher appearance grades and fewer imperfections. Average spinning potential yarn number is higher.

Extra long staple, American Pima, samples from the West are shorter and weaker than last season. Shirley Analyzer nonlint content and comber waste are lower while picker and card waste is higher. Yarns spun from these samples are weaker than last year.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States through December 17, 1971

Staple group Area, and Crop year	Lots tested	Fiber test results						Processing test results					
		Fibrograph		Mike fine- ness		Fiber strength Zero gage		S A nonlint waste		Yarn quality		Spin. Potent.	
		2.5% span	50/2.5 unif.	Zero gage	1/8" gage	G/tex	Mpsi	Pct.	Pct.	Skein str.	Apear- ance	Imperf- ections	No.
Short Staple:													
Southwest													
1970	39	0.94	46	4.5	86	21	3.3	6.2	91	115	27	43	
1971	27	0.95	45	4.6	80	20	3.9	6.8	85	117	31	37	
Medium Staple:													
Southeast													
1970	83	1.07	45	4.4	83	23	3.6	6.7	102	101	18	60	
1971	67	1.08	45	4.4	79	22	3.4	6.6	99	109	20	61	
South Central													
1970	139	1.08	45	4.5	82	22	3.1	6.1	101	107	21	61	
1971	141	1.10	45	4.3	81	22	3.0	5.9	103	113	20	62	
Southwest													
1970	52	1.07	46	4.3	86	23	3.2	6.1	105	116	26	64	
1971	28	1.07	45	4.5	86	22	3.1	5.6	103	121	20	59	
West													
1970	53	1.10	45	4.3	93	25	2.6	5.5	118	116	23	71	
1971	59	1.12	45	4.2	93	25	2.7	5.3	121	120	24	70	
U. S. Average													
1970	327	1.08	45	4.4	85	23	3.2	6.2	105	108	21	63	
1971	295	1.10	45	4.3	83	23	3.0	5.9	106	114	21	63	
Significant difference 2/													
		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3	

1/ Based on a limited number of samples of modal quality
 2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

1/
2/

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States through December 17, 1971 (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results					
		Length		Mike	Strength	SA	P&C	Comber	Yarn Quality		Imprfctns		SPY
		Span	Unif	Zero	1/8"	Non-lint	Waste	carded	combed	carded	combed	carded	comb
No.	In.	Pct.	Rdg.	Mpsi	G/trx	Pct.	Pct.	Pct.	Lbs. 22s	Lbs. Carded & Combed Yarn	Indx.	No.	No.
<u>Long Staple:</u>													
Southeast													
1970	14	1.14	45	4.7	82	23	4.5	8.6	109	122	103	100	21
1971	16	1.14	43	4.3	79	22	4.2	9.7	102	118	109	118	22
South Central													
1970	6	1.16	42	4.6	85	24	4.5	9.2	102	124	93	115	26
1971	3	1.22	43	4.5	83	24	5.3	9.6	113	130	107	117	20
West													
1970	15	1.17	45	3.8	93	27	3.4	7.7	16.2	134	87	97	40
1971	10	1.17	44	3.7	92	26	2.2	8.3	15.8	129	146	105	20
U. S. Average													
1970	35	1.16	44	4.3	87	25	4.0	8.3	17.8	119	135	94	101
1971	29	1.16	43	4.1	84	24	3.6	9.2	16.7	112	129	106	113
Array													
Extra Long Staple:													
West													
1970	2	1.42	32	3.8	111	36	2.6	7.7	18.8	71	66	71	105
1971	2	1.41	30	4.0	105	30	2.0	8.2	16.0			100	7
American Upland													
West													
1970	11	1.49	30	3.8	100	34	3.1	7.4	18.3	69	66	69	116
1971	13	1.45	31	3.9	98	32	2.6	8.3	17.3	66	66	66	116
Significant Difference 2/		0.02	2	0.2	2	1	0.5	0.5	0.5	4(22s)	4(22s)	5	5
										2(50s)	2(50s)	2	2

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1971

Production Area, Classification & Sample Number		Fiber Test Results										Processing Test Results - Carded Yarns											
No	Grade	Digital Fibrograph		Mike 2.5% span		Fiber Strength Zero Gage		S.A. Elong- 1/8"		Color Raw Stock Non- lint		P & C Waste		Strength		Elongation		Appearance Index		Imperfect Ins		Spin. Poten- tial	
		32s	32s	In	Pct	Rdg	Mpsi	Gtex	Pct	Pct	No	Pct	No	Pct	Lbs	Pct	Pct	No	No	No	No		
SOUTHWEST																							
CENTRAL TEXAS																							
TERRELL	3 LM LT SP	52	30	0.98	4 _{1/4}	5.1	78	18	7.4	5.7	6	4	8.7	257	74	6.3	5.0	120	110	46	35	33	
NORTHWEST TEXAS																							
COTTON CENTER																							
1 SLM LT SP	42	30	0.93	43	3.3	78	20	7.1	3.9	3	3	6.4	297	88	7.0	6.2	120	100	48	36	39		
LOCKNEY																							
1 SLM LT SP	42 _{1/2} /30	0.95	44	2.9	78	21	7.1	4.0	2	4	6.8	311	91	7.0	6.3	110	100	74	47	39			
MULESHOE																							
1 LM LT SP	52 ₂ /30	0.92	45	2.8	81	22	7.2	5.0	3	4	8.7	303	88	7.4	6.2	110	100	86	53	33			
PLAINVIEW																							
1 LM LT SP	52 ₂ /31	0.94	45	3.2	77	20	7.0	7.9	3	4	9.7	304	92	7.2	6.1	120	120	82	53	36	6		
NEW MEXICO																							
PORTALES																							
1 LM LT SP	52 ₂ /30	0.87	45	2.9	83	20	6.8	7.9	3	4	11.1	299	91	6.7	5.9	110	100	108	79	35			

1/ Reduced from 32 because of Bark

2/ Reduced from 42 because of Bark

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1971

Production Area, Classification			Fiber Test Results								Processing Test Results - Carded Yarns										
Sample Number		Digital Fibrograph	Fiber Strength	S.A.	Color	Strength		Elongation		Appearance Index		Imperfect's		Spin.							
No	Grade	Staple 2.5% span	Unif.	Mike	Zero 1/8" Gage	Non-Lint	P & C Waste	22s or 20s	22s or 20s	22s or 20s	22s or 20s	22s or 20s	22s or 20s	22s or 20s	Poten-						
Name & Code	32s	In	Per	Rdg	Mpsi	G/tex	Per	No	Per	No	Per	No	Per	No	No	No	No	No	No		
SOUTHEAST																					
ALABAMA GERALDINE	41	33	1.02	43	4.3	73	20	6.1	2.1	2	3	6.3	82	25	5.9	4.9	120	90	12	11	49
LAFAYETTE 3 LM	51	35	1.08	45	4.5	74	21	7.5	3.2	2	3	6.3	99	35	6.9	5.7	110	90	19	18	64
PRATTVILLE 4 LM	51	35	1.12	43	4.2	81	24	5.7	3.1	2	2	5.9	108	43	6.6	5.1	100	90	22	14	65
ST CLAIR 4 LM	51	34	1.07	43	4.6	80	22	6.0	2.6	2	3	6.8	91	29	6.1	4.7	100	90	19	21	57
GEORGIA BOSTWICK 4 LM LT SP	52	34	1.03	44	4.7	76	20	5.7	3.9	5	3	8.0	81	26	5.6	4.4	120	100	13	10	52
COMER 3 LM	51	33	1.08	43	4.3	76	20	6.3	3.2	4	3	6.9	88	29	6.2	4.9	110	80	21	25	59
STAPLETON 4 LM	51	34	1.07	45	4.9	77	22	5.9	3.9	3	2	7.5	87	28	5.7	4.4	110	90	14	15	52
NORTH CAROLINA LAURINBURG 4 LM	51	34	1.05	46	4.1	79	23	6.7	3.8	3	2	7.1	104	36	6.8	5.2	120	90	25	19	62
SHELBY 2 LM LT SP	52	34	1.04	44	4.4	74	20	5.9	4.9	5	3	8.6	81	26	5.6	4.0	110	90	22	16	53
SOUTH CENTRAL ARKANSAS																					
PROCTOR 3 LM	51	34	1.07	44	3.4	81	21	7.4	4.6	2	2	7.4	100	34	6.1	4.1	100	70	48	34	54
WYNNE 3 LM	51	34	1.10	42	3.3	81	23	8.4	4.8	2	2	7.7	109	39	6.7	5.0	120	90	37	26	65

* 100 percent selected for tests, less than 100 percent in the area

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1971--(continued)

Production Area, Classification		Fiber Test Results										Processing Test Results - Carded Yarns						
Sample Number	Grade	Digital Fibrograph	Fiber Strength	Mike Zero Gage	S.A. Non- Lint	Color Raw Stock	P & C Waste	Strength	Elongation	Appearance Index	Imperfect ns	Spin- Potential						
No	Name & Code	Stple 2.5% span	Unif.	Pet	Pct	G/tex	Pct	22s or 50s or 12 tx	22s or 50s or 12 tx	22s or 50s or 12 tx	No	No						
SOUTH CENTRAL--(Continued)		32s	In	Rdg	Mpsi			Lbs	Lbs	Pct	No	No	No	No	No	No	No	
LOUISIANA																		
NATCHITOCHES	3 SLM	41	34	1.10	43	3.9	79	21	7.5	2.8	2	2	5.6	103	37	6.7	4.5	
OPELOUSAS	3 LM	51	34	1.05	46	4.5	76	19	6.7	3.5	4	3	6.4	87	27	5.4	3.4	
SICILY ISLAND	3 SLM	41	34	1.06	46	4.1	81	22	7.1	3.5	2	2	6.7	104	36	5.9	4.1	
WATERPROOF	3 LM	51	35	1.13	44	3.8	79	22	8.0	3.7	2	2	6.2	108	39	6.8	4.4	
MISSISSIPPI																		
EDWARDS	3 SLM	41	35	1.06	44	4.1	80	22	6.5	2.8	1	2	6.6	101	36	6.5	5.5	
EDWARDS	3 SLM LT SP	42	35	1.09	44	4.1	81	23	7.2	2.4	2	3	6.2	104	37	7.1	5.5	
INDIANOLA	3 LM	51	35	1.02	43	4.0	84	21	5.2	3.9	2	2	9.0	88	28	5.5	4.3	
INDIANOLA	3 SLM	41	35	1.07	45	4.2	79	22	6.2	2.5	2	3	7.5	96	33	6.3	4.9	
SCOTT	3 SLM	41	36	1.12	42.	4.0	77	22	7.4	2.5	1	2	7.2	108	39	7.4	5.9	
ROLLING FORK	3 SLM	41	34	1.07	39	3.4	82	25	7.2	2.1	1	2	6.3	106	37	7.3	5.8	
TENNESSEE	CORDOVA	3 LM	51	34	1.05	45	4.3	80	21	6.5	2.7	1	2	6.4	90	29	6.4	4.7
MCKENNIE	3 SLM LT SP	42	33	1.02	46	4.3	78	21	6.2	2.6	2	3	6.8	99	29	6.6	4.6	

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1971--(Continued)

Production Area, Classification		Fiber Test Results										Processing Test Results - Carded Yarns										
Sample Number		Digital Fibrograph			Fiber Strength			S.A. Raw Stock			P & C Waste			Elongation			Appearance Index			Imperfect's No.		
No	Grade	Stple	2.5% span	Unif.	Mile	Zero Gage	1/8"	Gra	Non- Lint	Yel	22s	25s	22s or 25s or 27 tx	No	Pct	Lbs	Lbs	No	No			
SOUTHWEST NORTHWEST TEXAS																						
SLATON	1 LN	51	34	1.10	43	3.1	83	22	7.8	5.4	2	3	8.1	109	38	6.6	4.4	100	80	46	30	59
WESTERN ARIZONA																						
CASA GRANDE	3 MID LT SP	32	35	1.14	45	4.5	83	22	7.2	2.7	2	4	5.3	111	39	6.0	4.2	120	100	20	14	62
PARKER	3 MID LT SP	32	34	1.10	42	4.0	83	22	6.9	3.4	2	4	6.3	97	30	5.5	3.4	110	80	26	23	52
QUEEN CREEK	3 MID LT SP	32	34	1.11	42	4.3	81	22	8.0	2.9	2	4	5.3	104	35	6.2	4.3	120	90	17	13	58
CALIFORNIA																						
CHOWCHILLA	3 SLM	41	36	1.18	46	4.0	99	28	6.1	2.4	2	3	5.7	137	52	5.7	4.3	110	90	26	20	83
CORCORAN	3 SLM	41	36	1.15	46	3.7	102	28	6.0	2.7	2	3	6.4	132	50	5.7	4.3	110	80	36	25	82
DOS PALOS	3 MID	31	36	1.14	47	3.9	99	29	6.2	2.5	1	3	5.3	136	52	5.8	4.3	130	100	24	13	79
HURON	3 SLM	41	36	1.15	44	3.9	97	26	6.1	4.8	3	4	7.0	121	45	4.9	3.8	110	90	32	24	77
KERMAN	3 SLM	41	36	1.14	47	3.9	104	29	6.0	2.7	2	3	5.2	134	51	5.8	4.2	120	100	21	14	82
LOST HILLS	3 MID	31	36	1.14	45	4.2	95	27	6.0	2.2	1	3	4.9	125	47	5.7	4.3	130	100	20	15	77
SAN JOAQUIN	3 SLM	41	35	1.09	45	3.1	98	26	6.6	3.8	2	3	6.2	127	47	5.5	3.9	120	80	42	28	73
STRATFORD	3 SLM	41	36	1.14	46	4.3	101	28	5.5	3.8	1	3	5.9	132	50	5.6	4.2	120	90	21	18	64

* 100 percent selected for tests, less than 100 percent in the area

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1971--(Continued)

Production Area, Classification		Fiber Test Results										Processing Test Results - Carded Yarns									
Sample Number		Digital Fibrograph			Fiber Strength			S.A. Raw Stock			P. & C Waste		Elongation		Appearance Index		Imperfect's ns		Spin. Poten- tial		
No	Grade	Stple	2.5% span	Unif.	Mike	Zero Gage	1/8" Gage	Gra	Non- Lint	Yel	22s or 50s or 27 tx	22s or 50s or 27 tx	22s or 50s or 27 tx	22s or 50s or 27 tx	No	No	No	No	No	No	No
32s	32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	Pct	Pct	No	Pct	Lbs	Pct	Pct	No	No	No	No	No	No
WESTERN--(Continued)																					
WEST TEXAS																					
COYANOSA																					
3 SLM LT SP	42	34	1.10	4.2	3.8	78	21	7.6	4.1	3	3	7.1	99	34	5.8	4.0	110	80	46	32	57
PECOS																					
3 SLM	41	34	1.03	4.4	3.7	80	21	7.2	2.4	2	3	5.1	99	32	5.8	3.9	120	100	23	17	54

* 100 percent selected for tests, less than 100 percent in the area

Table 4 --Cotton, American upland long staple: Quality characteristics by production areas, crop of 1971

* Comber Waste and Combed Yarn Data
 1/100 percent selected for tests, less than 100 percent in the area
 2/Boller ginned Acala 1517 strains

Table 5-Cotton, American upland extra long staple: Quality characteristics by production areas, crop of 1971

Production Area, Classification & Sample Number		Fiber Test Results										Processing Test Results - Combed Yarns									
		Array Length		Fiber Strength		Elong- at'n 1/8"		S.A. Non- Lint		Color Raw Stock		P & C Comber Waste		Strength		Elongation		Appearance Index		Imperfect'ns	
No	Grade	Stple	UQL	Mile	Zero Gage	Gage	Yel	Gra	Stock	Waste	Waste	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	No	No	No	No
No	Name & Code											Pct	Pct	No	Pct	Lbs	Pct	No	No	No	No
32s	In	Pct	Rdg	Mpsi	G/tex	Pct															
ARIZONA	AGUILA	31	40	1.41	27	4.1	98	30	5.2	1.9	1	3	8.6	14.8	63	35	5.1	4.4	100	90	9
WESTERN	2 MID	31	40	1.41	27	4.1	98	30	5.2	1.9	1	3	8.6	14.8	63	35	5.1	4.4	100	90	7

Table 6 --Cotton, American Pima extra long staple: Quality characteristics by production areas, crop of 1971

Production Area, Classification			Fiber Test Results								Processing Test Results - Combed Yarns								
Sample Number			Array Length		Fiber Strength		S.A. Color		Elongation		Strength		Elongation		Appearance Index		Imperfect's		
No	Grade	Name & Code	Staple	UQL	CV	Mike	Zero Gage	1/8" Gage	Non-Lint	Raw Stock	P & C Waste	50s or 12 tx	80s or 12 tx	50s or 7 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx
			32s	In	Pct	Ridge	Mpsi	G/tex	Pct	No	Pct	No	Pct	No	Pct	No	No	No	
WESTERN																			
ARIZONA																			
PEORIA	2	44	1.49	30	3.9	102	36	6.8	3.4	3	5	100 PERCENT	70	38	5.7	5.2	100	110	
SAFFORD	2	46	1.51	31	3.9	100	32	7.9	3.5	4	5	71 PERCENT	68	37	6.1	5.2	110	110	
NEW MEXICO																			
LAS CRUCES	2	44	1.32	33	4.2	99	32	7.3	2.0	3	5	100 PERCENT*	62	36	5.8	5.0	120	120	
WEST TEXAS																			
EL PASO	2	44	1.41	33	3.9	94	31	7.9	3.6	5	6	100 PERCENT*	64	35	6.0	5.1	100	110	
EL PASO	2	46	1.48	33	3.8	99	32	8.0	1.2	4	6	95 PERCENT	63	35	5.6	4.9	110	110	

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* 100 percent selected for tests, less than 100 percent in the area

